C /396 cont./
323 made only in the sunshine. One day when rain threatened to fall, the women hurried to grab the vessel they were in the act of making and to carry it into the hut. It was swinging on all sides during this moving, but did not break at all.

From base to neck the vessel is constructed in the same fashion, the number of rolls superposed varying with the size of the vessel but never being very large. The handles are added last. Some are twisted and have been obtained in the following manner: a long, thin roll is bent in two and rolled on itself.

When finished, the vessel is put to dry. After it has hardened, the potter rubs it on the inside with a shining, polished stone (tankua or ita-nkua) (Plate XXIV, 3-4) until the surface is rendered shiny as /Plate XXIV appears here/ /385/ if glazed. The purpose of this operation is to avoid porosity of the inner wall of the vessel, which without that would be too permeable. The exterior of ordinary vessels is left as is. Vessels that are to be painted are apparently also polished on the outside. The polishing of the vessel is done over several days and slowly. The potter does it with great care (see Fig. 66).

C [239] [413] If the vessel is to be painted, the color is applied with a brush made of agouti hair or feathers held together in a tuft with wax (Plate XXIV, 1).

C Ce 386 The coloring materials used by the Chiriguano and Chané are of mineral and vegetable origin. The first are taken from rocks, of which I have had samples examined petrographically and chemically.

Chemical analysis gave the following results: the yellow samples contain clay (aluminum silicate and calcium carbonate) and iron in the form of hydrated oxide; the reds are of the same composition but contain less hydrated iron oxide and more iron oxide. In a specimen of yellow-brown ocher the iron oxide is abundant. In another, hard and compact, of a red-violet tint, the iron is almost entirely in the state of anhydrous oxide.

The yellow, red, and dark-yellow ochers, when heated in a test tube, change color and become dark red, with the exception of the violet specimen which remains invariable.

[Text continues on P. 154]

/385 cont./

C Ce 387 Two gray minerals are silicates of aluminum and calcium with traces of iron. They are almost pure clays.

A jet-black mineral is a calcareous manganese-bearing complex (manganese dioxide in the form of oxide crossed by veins of calcite).

Petrographically, these samples are some yellow ochers very compact (manganese-bearing, quartzose) or somewhat sandy, some very sandy red ochers, and finally slightly sandy clays.

The ochers all give a red color, pyrolusite (?) furnishes black, and the pure clays the yellowish white on which red and black motifs stand out (1).

1. Nordenskiöld (10, p. 145): "The colours used by the Chiriguano and the Chané on the Rio Itiyuro are black, red, brown and white. The white is caolin, the red, brown and black are obtained by pulverizing schists of these colours." /cited in English./

C 323 Colors of mineral origin are applied on the walls of the dried and polished vessel before firing.

C 323 237 Most of the vessels from the upper Pilcomayo are distinctive because of motifs of a glossy, solid black which the Indians obtain by rubbing, shortly after firing, with a resinous excrescence looking like a white muff, which a kind of cochineal (?) forms around /386/ mimosa branches (in Chiriguano: iskayanti) and in which she deposits eggs (Plate XXIV, 5).

According to Father Giannechini (Diccionario Chiriguano-Español, etc., p. 200), who was the first to note the use of this material, it was a question of the viscous saliva of an ant (?) which sticks to the trees. The /Fig. 59 appears here/ Chiriguano potters would use it to paint their vessels after mixing it with roucou. In reality, this information is inexact. The resinous muff is not made of saliva but a kind of manna or lac. It is rubbed directly against the sides of the vessel to produce the solid, glossy black of certain motifs.

/386 cont./

323 The paintings on some vessels produce a particularly successful /387/ effect, thanks to the alternation of brilliant.

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Fig. 59. Fabrication of a vessel: the inside surface is polished after being flattened with the hand.

323
solid red with black of the same nature. The first of these colors
● [386] is taken from the famous roucou, whose oily paste is mixed with
resin, kneaded into a loaf, and melted on the hot walls of the
vessel.

/387 cont./

C 323 386

The name tarawirisi is also given by the Chiriguano to objects resembling loaves of bread kneaded by hand which are composed of a resinous material mixed with wax. According to the explanations given me by the Indians themselves, this

C 417 415

Fig. 60. Forked tree-trunk serving as a shelf for putting vessels on. (After a sketch by the author.)

C 323 386

substance is taken from a mimosa. After being sprinkled with boiling water, it is kneaded and dried in the sun. Its color is yellow or red, but after firing it becomes black.

I could not learn whether this black glaze was applied over a layer of black paint or spread directly on the walls of the vessel. In every case the designs made by this process are much less regular than the ones drawn with a brush.

C [124]

My collections of pottery, which consist of nearly 700 pieces, do not contain any glazed specimens. Nordenskiöld (p. 164) assures us that the Chiriguano and the Chané of the Parapití coat their yambui with a sort of gum called tarawisi, a word which, except for one syllable, is the same as the one designating the resinous substance we have just been considering.

C 114 323 386

Ce
/387 cont./
This makes me think that glazing implies a technical process analogous to the one in use on the upper Pilcomayo.

The Chaco Indians draw crude decorations on their vessels with palo santo resin, which they apply after firing. According to Nordenskiöld (id. supra), the Chané of the Ituyuro probably use the same method to decorate some of their vessels with black designs.

After being painted, the vessel is put in the shade to dry for several days. It is only when the sides have acquired a certain hardness that the firing process is begun. The vessels are then taken to a spot where there is plenty of dead wood. A large quantity is collected, with which the vessels are covered from bottom to top. Generally, long pieces of bark are selected, which burn brightly.

They set fire to this pyramid of wood and, with a long pole, the /388/ potter watches to see that no brand burns directly against the walls, which would bring on a "shot of fire." When she ascertains that a vessel gives a metallic sound on being touched, she scatters the firebrands with her pole and, by rolling it, makes it go out of the fire.

It may happen that in the course of the firing a vessel may suffer some cracking. This is remedied by taking a little moist earth mixed with dung and applying it on the split while the vase is still hot. The fissure closes, but remains noticeable.

Classification of Chiriguano Pottery

The figures which illustrate this text, the plates published by Nordenskiöld (10, pp. 155-167), and the diagram of Oates (2) give a better idea of the more common forms of this pottery than any description. However, a few remarks are called for.

Vessels with a subglobular belly surmounted by a low, wide neck flaring at the top constitute, without doubt, the most widespread type. (Plates XXXV-LVII.)

/530 cont./ Let us not forget that pyrography is a masculine activity and that men are more open than women to every innovation. Moreover, for the most part they have gone to Argentina, and from there, with a new turn of mind, they brought back models and inspirations foreign to their ancient tradition. This European influence is patent in many cases: thus, the calabash of Plate LXVII, 3, and the one of Plate LXIX, 1, are decorated with Arabic numbers. The calabashes of Plates LXIV, 1, LXV, 1 and 5, and LXIX, 5, are decorated with stylized flowers or stars which are not Indian at all. The influence of the white men and their bad taste is evident in the motifs painted in roucou which decorate the calabash of Plate LXV, 3.

531 Anthropomorphic or zoomorphic representations are commoner on calabashes than on pottery. A rough drawing of a man greatly schematized /531/ is represented on the calabash of Plate LXIII, 1 a and b. On the calabash of Plate LXIII, 7 a, dogs have been engraved and birds on those of Plates LXIII, 1, LXVIII, 3 a and b, LXIX, 7, and LXXI, 3. A llama was represented in very expressive fashion on calabash No. 2 b on Plate LXIII; and on the calabash of Fig. 85 a and b one recognizes a horse and a feline animal, a puma or jaguar. Three fish and a bird appear on the specimen of Plate LXVII, 2.

531 The Indians of the Ivo mission and the ones from 532 the Caipipendi valley paint their calabashes with roucou. 386 This color is very difficult to rub off and does not spread beyond the periphery of the colored designs. /Fig. 86 appears here. To obtain this result, the Chiriguano begin

C /431 cont./
531 by taking off the epidermis which covers it, except at the places
322 which are to remain uncolored. Then they smear its exterior
386 surface with roucou and scrape the tegument where they have
saved it. The figures then stand out in red against a yellowish
background. An analogous process is in use among the Pauserna
CCC (Nordenskiöld 5, p. 344). The motifs decorating most of the

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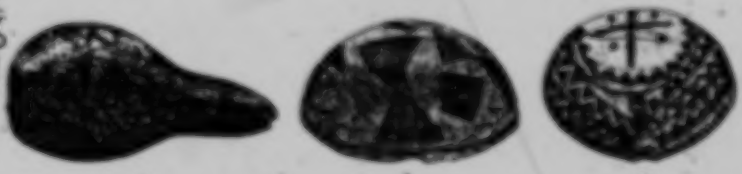

a b c

Fig. 66. a, b, and c. Miniature calabashes, "liqueur glasses" and children's toys. Chiriguano and Chané. Prov.: a, Tuyunti, near Aguaray (Salta Chaco); b, Nawirenda (upper Pilcomayo); c, id. (About 1/2 nat. size.)

C
531 The motifs decorating most of the
199 painted calabashes I collected in Ivu are unfortunately very much influenced by European models, and beside very pretty designs one finds others of the most distressing banality.

/431 cont./

Chapter VIII

Weaving

286 (170) Weaving is a very widespread industry among the Chiriguano. Unfortunately, at the present time its products are commonplace and, since they have been using aniline dyes (1), often very ugly.

• 386 824

1. The Chiriguano used to extract blue dye from a plant they call kaa-howi, that is to say, "blue grass." They also used to grow it. In order to color their tiru (large sleeveless bag slipped on over the tipoy, of the same shape but less ample), they dipped them into a decoction of this grass. Sometimes also they used to add coloring woods, such as palo soto or quebracho, to this bouillon. The leaves of a tree which easily reaches a height of eight to ten meters, the iwira kaa-howi, also furnish a blue dye, but for that they must be young and the tree must be in bloom.

With piari, black resin which exudes from the trunk of the algarroba (Prosopis), Chiriguano women blacken the tiru which they had dyed blue. (Diccionario Chiriguano-Español y Español-Chiriguano, etc., pp. 16-17 and 173.)

286 (291) (170) Most of their ponchos are copied from those of the Bolivian half-breeds.

/432/ The type of loom prevalent among the Chiriguano is the one which has been given the name Arawak loom. Plate LXXII [1/2] gives an idea of it. Two forked sticks are set in the ground. They support two /Fig. 87 appears here/ parallel crossbars, one of which, the lower one, is a pestle of hard and heavy wood. The warp threads are rolled around them, but at each circuit turn back on themselves after going over a /433/ small cord stretched parallel to the ground. Once the cloth is finished, this string is removed, and in an instant the piece of cloth, which until then formed an endless band, opens up (Fig. 91). [2]

[1] [See P. 294 -- Analysis]
[2] [See P. 295 -- Analysis]

/482 cont./

302 faces and legs oiled in this way, which gives them a very strange reddish and shiny hue. This custom, which was already [191] noted /482/ in the sixteenth century among the Tupinamba of [178] the Brazilian coast, is tending to fall into disuse.

Roucou in paste form is kept in a small cow-hoof bag (Fig. 302 139). /Fig. 139 appears here/ as is kalasapa, a substance com- 386 posed of a mixture of roucou and pounded aroma seeds, which [419] gives a violet color.

757 4. Jaguar fat (yaguapira) cures any "leprosy" (karotti) if 237 one rubs oneself with it after heating it.

[152] 5. Iguana fat makes cramps go away and heals wounds. Its use is external.

6. The dried penis of a fox makes toothaches and earaches go away. For that it suffices to touch the ailing part with the end /Fig. 140 appears here/ of this member. The Indians consider it very malodorous and touch it only with repugnance. [415] To avoid this inconvenience they provide it with a handle and shut it up in a bamboo case (Fig. 141).

7. Deerhorn heated and /Fig. 141 appears here/ applied against the neck will cure a stiff neck. The medical use of [172] deer (wasu) horns explains the frequent presence of the horns of this animal in the archeological strata of the neighboring Andean regions. Some have thus been found in the ruins of the Alfarcito, in the Quebrada de Humahuaca (Debenedetti, 4, p. 21), at Tilcara (Debenedetti, 5, p. 232), at La Paya (Ambrosetti, 6, Fig. 235, p. 453), and at Tastil (Boman, 7, Vol. I, Plate XXIX, Fig. 78 f).

858 Horns adhering to a fragment of the skull and whose use 308 could only have been magical or medical must be distinguished 237 from the ones which the Indians work into awls. These in- 412 struments still have a ritual use and are reserved for piercing the lower lip of children when they are old enough to wear the labret. At least this is what Campana (p. 80) informs us. Besides, the Indians all have confirmed this detail to me. [171] Formerly, the Tupinamba of Brazil practiced this operation with an awl of the same nature (see Métraux, 3, p. 105).

1: Métraux--384 E-6 (1959) 1950 SF10 Chiriguano SF10

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Fig. 139. Small bag made of corn husks, containing roucou paste. Prov.: Salado grande (upper Pilcomayo). (About 1/2 nat. size.)

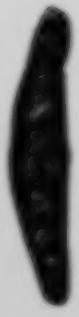

Fig. 140. Calabash containing roucou seeds. Prov.: Caipipendí. (About 1/5 nat. size.)

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Fig. 141. Case containing a fox penis (sguara-kankuy). Prov.: Ibopeyti. (About 1/3 nat. size.)

2:Métraux E-5 (1929) 1948 SF10 Chiriguano SF10
Chané SF8

are based on a triangle surmounted by a scroll, which is multiplied in countless variations. C 323 [531]

Women potters (pl. 41, *top, left,* and *bottom, left*) tempered the clay with crushed potsherds and built up their vases by coiling. They painted them with several kinds of ocher and with black obtained from rosin. [C 462] [386]

Spinning and weaving.—Among the *Chiriguano*, wool is more commonly used than cotton for textiles, but *Chané* fabrics are generally of cotton. The fibers are spun with a drop spindle weighted with a clay whorl (pl. 42, *center*). Although garments are in part Andean in shape, the loom remains of the vertical type. Formerly, indigo was the favorite native dye; today aniline dyes have entirely replaced it. The ornamentation of the fabrics is limited to a few stripes. C C 286 283 171 386 [531]

Netting.—Fishing nets and carrying nets are made by means of a wooden gage in a reef-knot technique. C 285

Basketry.—Fans, round baskets with overlapping lids, and sieves are twilled with palm leaves in the best Guiana fashion, but wickerwork basketry is very common. No large baskets for carrying or storing food are made.

Gourds.—The painted, incised, or fire-engraved (fig. 61) gourds (*Lagenaria siceraria*) used as cups are, after pottery, the best expressions of *Chiriguano* art. The motifs are mainly geometrical, with occasional realistic representations. C 415 531

FIGURE 61.—*Chané* calabashes. *Left:* Specimen with lid (approximately ⅙ actual size). *Right:* Pyrograved specimen (approximately ⅓ actual size). (Redrawn from Nordenskiöld, 1930, fig. 50 and Métraux, 1930 b, pl. 62.)

/22 cont./

137 824 is manufactured. On the slopes of the hills is also found the blackberry /zarzamora/, whose fruit is so pleasant to the palate, but whose thorn, which is like a cat's claw, is quite dangerous and barbed. The mulberry in Chiriguano is called "Tatayigua."

245 NARANJO /orange/. -- Neither the orange nor the lemon are native to the Chiriguano region, but they flourish greatly and grow to some height. Where it is easy to open irrigation ditches and possible to irrigate orange and lemon trees, they produce large, juicy fruit, the former being very sweet and the sourness of the latter being mild. The citron tree flourishes and is a plant imported here; its fruits are as big as gourds. The Chiriguano cultivate the orange tree here and there, but the whites cultivate it on a large scale; I know of some /23/ rather large orange groves, and they exist in nearly all the missions.

137 824 NOGAL. -- This tree of extraordinary height is only found wild; the leaves are very small and somewhat like those of the true nogal; the fruit is edible, but its shell is hard to crack. [258] The flavor and characteristics are the same as those of walnuts, so that oil, which is used instead of that from the olive, can be extracted from them. [322] The wood is rather dark and good for carpentry and cabinetwork, but it is inferior to that of the true nogal, which is found in the cultivated state where there • [386] is sufficient moisture; a dark coffee-colored dye is prepared from the leaves, the bark of the trunk, or the roots, for dyeing wool, for staining other woods, and for printing ink.

NOPAL. -- This is the fruit-bearing plant which is most abundant in the region and which is found everywhere without any cultivation, for which reason it is most highly regarded by the Chiriguano, who is naturally lazy. But since it is sought [245] by the cattle, it is beginning to disappear or, more exactly, it is not found very much in the woods and clearings, but the Indian still cultivates it because it flourishes easily without need of irrigation and multiplies without the need of planting other shoots. It is convenient for the laziness of the Indian; the yellow flowers come out around each spathe and the fruit matures there as well; it is full of small seeds and sweet pulp, pleasant and refreshing. Some trees are covered with long

/181 cont./
462 bulls, deer, etc. If all this carving were woman's work, it
415 would have but one name, Sacuarama, but since it is man's
531 work, each figure has the name of the quadruped, biped, or reptile that it represents (2).

[825] 2. Thus they say Machuru haangaño, figure of a lizard, Yaimba haangaño, figure of a dog. Even the men call the figure of a jaguar or a dove: Sacuarama.

/182/ With this second task the work can be considered finished. Days or weeks are employed depending on the greater or lesser quantities of the matés. They now color all the
[386] etched figures with ground charcoal and paint the empty spaces
[239] with Urucú, achiote, making them firm with the Taragüirisi, which is abundant everywhere, then singeing them in the flame of the fire so that the pictures will never lose their shine and luster or the painting of carbon and urucú come off (1).

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1. The Taragüirisi is a species of ant which is common in cold weather. Its length is not over half a centimeter and its thickness three. It moves about the small branches of certain small trees, where it leaves its speckled whitish excrement. All potters provide themselves with an abundance of this material.

Pottery

323
[462] I shall now go on to consider women's work, limiting
[317] myself to the most important, such as clay vessels and textiles.
[484] For the former the Chiriguano woman provides herself beforehand with the best clay, which she knows very well and even brings from long distances, if it is not found in the territory of the tribe. Naturally the potter not only wishes to avoid the loss of her labor, but also, insofar as she can, she wishes to

/194 cont./

302 The flower of the Guambero, puñilane, has the same properties as the caraiapa, but it is little used, and they content themselves with just sticking the leaves on their faces, and this only at carnival time, the result being a gay set of dancers. Finally, the indians have a fourth cosmetic, which they call Mboiuruvu, or achiote of the viper. It is red, and they assert that it is food for the viper, hence its name. They use it by rubbing it on their cheeks, which makes them a bright red.

292 [529] [178] As noted above, the ancient Chiriguano man, Ava, and the Chiriguano woman of long ago, Cuña, at solemn fiestas and on days /195/ of general rejoicing, after having adorned their faces and washed their persons, wore the tiru and the mandu, respectively (1).

1. If the Indian dressed in a tiru does not have breeches, guarupi tímbiao, he wraps his body from the waist down with a shorter poncho which comes to the calf. It is also of cotton, and the women weave it. It is called Tirupeé, or sheath that warms, "alias" wrap /abrigo/.

[286] [462]

The Tiru is a kind of long poncho, from which it differs because of the two openings that it has near the wrists: the hands are put into said openings and remain free for movement, and, the tiru fastened to the wrists, nothing impedes the motion of the one wearing it. It is spun and woven by the women, and the raw material is cotton. The tiru differs in color, some are black, others dark red, and others blue. The first color is obtained with black mud, Tuñúú, mixed with the resin of the algarroba, Piari; the second, with sotillo bark, Urundeibuvu; and the third, with wild indigo, Caogüi (2).

[286] 292 386 [824]

2. Today this is all purchased commercially, and the indigo plant, which is abundant in certain places, is ignored. They buy the indigo and the other colors, just as they buy for their poncho and their tipoi.

[437] [178]

/196 cont./

292 The black tiru is first dyed with sotillo bark, and then they
• 386 immerse it in a vessel which has well-steeped black mud and
824 algarroba resin. After some time they wash it and dry it out, leaving the permanent color. The dark red is made with only boiled sotillo bark. Finally, to dye with indigo they crush this leaf and expose it to the sun's rays, then they crush it again in the same way, after which they put it in a large earthenware vessel with water, in which the tiru is immersed and comes out a light blue, but, if they want it to be like the blue of drill, it is necesary to boil the indigo.

In order to dye everything red they also use a species of onion that they call Tupasipi, which literally translated, means feet of God and is abundant in the fields, and another
292 one called Chapi, which is found in the hills. Everything said about the tiru is applicable to the mandu of the women, with the sole difference that this is open at both ends and is attached to the shoulders with two enormous silver needles that they call Yu guasu, big needles, which are also disappearing.

301 When a woman is occupied with domestic and other work,
302 she ties her hair up tightly with a band, Apicuá, /196/ of cotton
[529] or wool, so that it will not inconvenience her at her tasks, but
[515] when there is a fiesta, she washes her person, washes her head, combs her heavy and shining hair, and lets it loose, flowing over her body as far down as it will go (1).

[718]

1. The young women today put up their hair like the white women, making braids through which they draw a band that they call Allopea, braided cord. The hair fastened in the old way was like a baton, since not a hair was to be seen, even horizontally, all of it being covered by the band, allopea.

Schwedenstiftet E-4,7 (1908-1909, 1912) 1910
SF10 Chiriguano SF10
Chaco SF8

Both men and women among the Chiriguano and Chané have sandals which, however, they seldom wear. In Part I of this work I have given an account of the geographical distribution of sandals in S. America. Obviously sandals are a cultural element which the Chiriguano and Chané have got from the area of civilisation in the west.

A pair of sandals with fastenings differing from the usual kind are depicted here. A sandal with very similar binding but of another shape is described and depicted by Hans von Rosen[1]) in his recent, splendid work.

The Chiriguano and Chané wear girdles which as a rule are woven, though they are sometimes made of leather. As I pointed out in Part I, the woven girdle belongs to the western cultural elements and the leather belts to the southern. The leather girdles worn by the Chiriguano and Chané are provided with pockets and sometimes ornamented with cojins, and are consequently imitations of the gaucho cincture worn by the Argentine gauchos. Nino[2]) is of the same opinion, and he points out that they are called «bolsa» (from the Spanish word «bolsa»[3]) owing to their being provided with a pocket.

As already mentioned in Part I the woven «head-band» or frontlet also belongs to the dress of the Chiriguano and Chané-men. The frontlet is certainly a western culture-element.

Chiriguano and Chané shirts and ceremonial tipoys are of native make and are often dyed blue with indigo. The frontlets are blue or red. Chiriguano and Chané women wear a kind of hair-band with tassels which they most likely learned to make in the missions.

[1]) (4) Fig. 84, P. 103.
[2]) P. 102.
[3]) «Bolsa» is «bosa» in the Chiriguano language as these Indians do not pronounce l.

S:Nordenskiöld E-8,4 (1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chané SF8

Maps of the geographical distribution of various kinds of ornamentation can scarcely be drawn up at present with the exception of a few very characteristic specimens, e. g. the spiral. This is found on earthen vessels from the Chané on the Rio Itiyuro, and from the Chiriguano, but not from the Chané on the Rio Parapiti.

The colours used by the Chiriguano and the Chané on the Rio Itiyuro are black, red, brown and white. The white is caolin, the red, brown and black are obtained by pulverizing schists of these colours. The Chiriguano sometimes mix Urucu with oil. Vessels are probably painted with this mixture only after burning.

Pottery is undoubtedly the chief art practised by the Chiriguano and Chané. We may, indeed, assert that it is the only one that is still of very great importance to these Indians. It is an interesting fact that, though these tribes have been in close contact with missionaries and other Whites for nearly 400 years, and though their country has been flooded with European goods, their pottery has been influenced very little by foreign culture. It is still genuine Indian. This holds good not only of its shape, but to an equally great extent of its ornamentation. It shows how conservative the Indian is towards anything that cannot make easier for him the struggle for life. A cultivated plant can spread in a few years over a large part of a continent, whereas one will not take the trouble to adopt a foreign ornamentation or foreign types of household furniture. This does not imply that the pottery of the Chiriguano and Chané now has the appearance that it had 400 years ago. It has changed, as the Indians themselves told me, but the change has chiefly consisted in ringing the changes on old Indian patterns. How and how much it has changed, can only be proved archæologically. Unfortunately, I do not possess the archæological material. What I found in the country of these Indians probably goes very much further back in time than 400 years, and has very little in common with

Ce /245 cont./
323 The coarser vessels, as well as all cooking vessels, are
531 decorated with only finger imprints and clay loops put on them.
ce The finer vessels are subsequently painted (see Pl. 19 /see p. 93/).
[237] /246/ With a brush made of agouti hairs (1) the decorations are
[413]

1. Dasyprocta.

Ce
[386] painted in white, dark brown, and black. The white pigment
is a kind of earth (kaolin); the others are made out of slate and
Ce sandstone. They paint freehand and compose the decorations from
323 memory, not from models. Wood, maize cobs, and cow excre-
ment are heaped around the vessel. The fuel is lighted and must
burn with a vigorous fire for a quarter of an hour or, if the vessel
Ce is large, even longer (Fig. 122).
[314] If the vessel has been painted, it is varnished with resin,
[824] "taraviruti," which is collected from a Mimosoideae, and with
resin from the palo santo (see p. 93 /untranslated; Palosanto is
identified there as Bulnesia Sarmienti/). The former gives a
yellowish polish; the latter looks like greenish-black glaze.
Ce When a pot is made, it is baptized before it has cooled,
[789] so that water will boil rapidly in it.
c In Maringa's village individual vessels were painted
531 with a mixture of urucú or some other color and a vegetable fat.
323 I was unable to see how this latter was prepared.
●386 The Chiriguano and Chané women are skillful weavers.
Ee The material for the Indian weaving is, as a rule, cotton and
286 sometimes sheep wool.
Ee Since large quantities of cloth are imported by the whites,
[439] native weaving is disappearing more and more. Thus, I did
[177] not see any looms among the Chané in the Itiyuro valley, and
native woven goods were very rare.
Ee As a rule, all the weaving of these Indians is without
286 ornamentation, or else this is very simple. The girls in the
531 missions learn from the monks how to embroider all kinds of
[797] flowers, such as roses, violets, etc. They do this superbly.

7:Rosen E-5 (1901-1902) 1924 SF10 Chiriguano SF10

302 The hair is tended with very neat-looking wooden combs (fig. 196).
[442] Among the Chiriguano I also noticed composite combs of the type used in the Chaco (fig. 85).

[386] Among the men as well as the women, the custom obtains of painting
[824] the face red, the pigment being prepared from Bixa orellana. Many of the men I met in the neighbourhood of San Luis had red-painted the whole face below the eyes, and some of the women had circular red
302 spots, about 3 to 4 cm in diameter, painted on their cheeks. On the
304 other hand, I did not see any tattooed Chiriguano. Instances of tattooing have, however, been noted by Nordenskiöld, who also has seen Chiriguano women who had stained their teeth dark blue with some vegetable extract.[1] In the past, tattooing as well as teeth-staining were commonly practiced by the Chiriguano.

301

Fig. 197. Lip-stud (»tembeta») of tin, with inlaid, painted, turquoise-coloured glass-beads. Chiriguano, Bolivia. ⅔ s. Riksm. 03. 3. 822.

Another Chiriguano ornament intimately connected with the human body is the lip stud (»tembeta»), which is exclusively worn by men and by youths who have attained marriageable age. The Chiriguano lip stud of the present day consists of a hollow tin cylinder with two laminate projections (fig. 197). The cylinder is filled with some waxy substance, into which are embedded a number of small beads of stone, glass or porcelain, usually of a turquoise-blue colour. The lip stud is inserted from the inside, through a hole made in the lower lip, so that its circular, bead-beset, front surface barely shows beyond the skin of the lip. The base of the lip stud, which is slightly concave, then rests against the teeth of the lower jaw. This quaint ornament creates no displeasing impression, but should a Chiriguano take it out, he would look both pitiable and ridiculous, as the saliva then runs through the large hole in the lip. Hence it is considered disgraceful to be seen without the lip stud, and on many occasions I have noticed the women scornfully deriding such men as had sold their lip ornaments. As soon as a man had taken out his lip stud, he generally put his hand to his mouth for concealment until he had time to put in a substitute stud, usually made of wood.

The lip stud that is here shown, which weighs 18.5 grammes, has a base plate 3.4 cm long, and its cylinder is 1 cm high, with a diameter

[1] Nordenskiöld (15), pp. 83, 85 and (18), pp. 187—188.

Pt Schmidt--PC E-S (1936) 1938 SF10 Chiriguano SF10
Chane SF8

Ee 524 199

/37 cont./

These Indians received two games of chance from the whites, the game of dice, which they call by the Spanish name "dado," and the game with a cow's leg bone, which they call "taba."

Agriculture

C Ce 241

I have already explained in the chapter on food and drink that the cultivation of maize as an agricultural product is common, and among the Chané of the Parapití the cultivation of the sweet potato. Mandioca is only cultivated rarely and has no importance in the economy of these Indians. Various species of beans are planted, also one species of cactus, some gourds which have edible fruits, and also a little tobacco.

Ee 241 199

In addition to these edible or stimulating native plants that are cultivated, there are some others received from the whites, but these have little importance in the economy of these Indians. According to Nordenskiöld (171), they are the following: sugar

171. Nord. 2, pp. 23 and 24.

cane, peanuts, watermelon, muskmelon, figs, oranges and millet, and Métraux also mentions the pepper among them (172).

172. Métraux 1, pp. 338 and 339.

C Ce 241 [415] [383] [386]

In addition to these edible or stimulating plants, there are cultivated various species of gourds whose fruits are not edible but are used to make containers, cotton for making thread, urucú for obtaining red dye, and, among the Indians of the Parapití, also a species of cane, Harundo Donax /Arundo donax/, which grows wild in great quantity on the banks of the Pilcomayo, but not on those of the Parapití River.

R Schmidt--141 E-5 (1930) 1938 SF10 Chiriguano SF10
Chané SF8

C 386 323 531

/16 cont./ The white color is [illegible], the red, dark brown, and black are pulverized mineral substances of the corresponding colors (248). Métraux has published the results

248. Nord. 2. p. 145.

of chemical analyses and petrographic observations which he made on these mineral colors (249).

249. Métraux I, 200.

According to Nordenskiöld, the Chiriguano at times paint their vessels with a paint consisting of a mixture of urucú and oil, which is probably applied after the vessel has been baked (250).

250. Nord. 2. p. 145.

C Ce 323

Before the vessel is baked, it must be quite dry. In the case observed by Nordenskiöld among the Chané on the Itiyuru River, the vessel was dried for a day in the shade, which can be done, according to another note by Nordenskiöld, in the sun as well (251). The baking is done, according to Nordenskiöld's

251. S. Lmassé, op. cit., p. 121.

observations, by piling firewood, maize cobs, and dry cow dung around the vessel. This fuel must burn with a strong fire for a quarter of an hour and, if the vessel is large, even longer (252).

252. Nord. 1, p. 346. Cf. Nord., Fig. 122.

C 323 [824]

Some of the Chiriguano vessels are varnished. According to Nordenskiöld, such vessels are common among the Chiriguano and Chané on the Itiyuru River. They smear them with the resin of a Mimosoidea, which the Chiriguano call "taraviruti." When varnished in this way the vessels acquire a yellowish sheen. Only the vessels of the Chané on the Itiyuru sometimes show black

Ce 323 920 386